

CLAIMS

Claims 1-36 (canceled)

Claim 37 (previously presented) A device for the treatment of substrates, comprising:

a radiofrequency power supply;

an antenna, comprising at least one coil to generate an alternating magnetic field, connected to said radiofrequency power supply; and

an energy absorbing species inductively heatable by said alternating magnetic field, said energy absorbing species effective to transduce heat generated therein to said substrate and to a reactant.

Claim 38 (previously presented) The device of claim 37, wherein at least one of the substrates is a tissue(s), a cell(s), a protein, a lipid, a nucleic acid, or a carbohydrate.

Claim 39 (previously presented) The device of claim 37, wherein said substrates are *in vivo* or *in vitro*.

Claim 40 (original) The device of claim 37, wherein the power supply generates radiofrequency energy from about 20 KHz to about 40 GHz.

Claim 41 (canceled).

Claim 42 (previously presented) The device of claim 37, wherein said antenna comprises at least one electrical conductor.

Claim 43 (original) The device of claim 42, wherein said electrical conductor is solid wire or hollow tubing.

Claim 44 (previously presented) The device of claim 37, wherein said antenna is of a substantially planar geometry or of a non-planar geometry or is a solenoid antenna.

Claim 45 (original) The device of claim 37, wherein said energy absorbing species is a susceptor.

Claim 46 (original) The device of claim 37, wherein said energy absorbing species comprises matter with non-zero electrical conductivity.

Claim 47 (original) The device of claim 37, wherein said energy absorbing species is diamagnetic, paramagnetic, or ferromagnetic.

Claim 48 (original) The device of claim 37, wherein said energy absorbing species is an ionomer, a conducting polymer, an alkali metal, a transition metal, a lanthanide, or a metalloid or a combination thereof.

Claim 49 (original) The device of claim 48, wherein said energy absorbing species is colloidal or non-colloidal gold, silicon, cadmium selenide, cadmium sulfide, ruthenium, indium phosphide, indium arsenide, gallium arsenide, gold maleimide, gallium phosphide, hydroxysuccinimidyl gold, nickel-copper, nickel-palladium, palladium-cobalt, nickel-silicon, stainless steel, iron oxide, ferrite, titanium, Phynox, palladium/cobalt alloys, nitinol, titanium, titanium alloys, zirconium, gadolinium, aluminum oxide, dysprosium, cobalt alloys, nickel, gold, palladium, tungsten, or alloys of materials from this group.

Claim 50 (original) The device of claim 37, wherein said energy absorbing species is a metal nano- or micro-particle, a semiconducting nano- or micro-particle, a magnetic nano- or micro-particle, a polystyrene encapsulated metal particle, a buckminsterfullerene, or a liposome-encapsulated metal particle.

Claims 51-69 (canceled).

Claim 70 (previously presented) The device of claim 37, wherein said reactant is a protein, a lipid, a nucleic acid, or a carbohydrate.

Claim 71 (previously presented) The device of claim 37, wherein said reactant comprises a pharmaceutical or a diagnostic compound.